

REMARKS

This amendment is responsive to the Non-Final Rejection of February 20, 2009. Claim 29 has been amended herein in accordance with the Examiner's suggestions. Reconsideration and allowance of all claims are requested.

The Office Action

Claims 24, 25, 29, 30, 33, 51, and 52 stand rejected under 35 U.S.C. 101.

Claims 2, 3, 5 7-8, 24, 29-30, and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander (US Patent No. 6,177,931) in view of Thuraisingham (U.S. Patent No. 5,481,700).

Claims 6, 17, 20, 45-46, and 49-52 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander and Thuraisingham in view of Vallone (US Patent No. 6,642,939).

Claims 9, 25, 34, 36-38, and 41-44 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander and Thuraisingham in view of Arellano.

Claims 10-13, 35, 47-48, and 53-43 (sic) stand rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander, Thuraisingham, and Arellano in view of Vallone.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander and Thuraisingham and Vallone, as applied to claim 17 above and further in view of Sezan et al. (US 2005/0091686 A1).

Claim 54 does not stand rejected on art and is understood to contain allowable subject matter.

The Claims Distinguish Patentably Over the References of Record

Claim 5 sets forth a data processing system which includes a demultiplexer, an analyzer, a storing computer routine for storing facts, etc., in an adaptive memory, and a reasoning and fact reconciling computer routine. The reasoning and fact reconciling computer routine uses modal logic to control the adaptive memory. Alexander fails to disclose a data processing system with this

organization. Thuraisingham fails to overcome the deficiencies of Alexander with regard the claimed features.

The Examiner maintains the contention that Alexander teaches a demultiplexer, citing various portions of the Alexander patent. However, the most recent rejection of claim 5 does not cite any specific portion of the cited references. Rather, the Examiner states that, according to Alexander, "as multimedia data is received, it is broken down into portions (data components). For example, a CNN news program would be broken down to "International News," "National News," "Entertainment," etc. The multimedia transmitted includes both audio and video." Even if the Examiner's statement is accurate, Alexander does not teach or suggest the claimed demultiplexer. Transmitted multimedia data that includes video data and audio data does not teach or suggest a demultiplexer.

The Examiner has previously cited Column 12, lines 17-44 as describing a demultiplexer. However, that cited passage describes storing content to a DVD and indexing the stored content for user review and selection of stored content, but is silent with regard to the aspect of a demultiplexer that demultiplexes at least visual, audio, and multimedia content into data components. The Examiner further previously cited Column 19, lines 5-12 of Alexander as describing the claimed demultiplexer. However, that passage merely discusses a searchable index of recorded news programs, and is silent with regard to a demultiplexer. Still furthermore, the Examiner has previously cited Column 31, lines 40-48 of Alexander as disclosing a demultiplexer. However, that portion of Alexander merely discusses digitizing and storing an audio portion of a news broadcast, but does not disclose a demultiplexer. Nothing in Alexander suggests that media content is in a format that requires demultiplexing, and thus Alexander does not mention separating out or demultiplexing data components of a common data signal, as is performed by a demultiplexer. Withdrawal of this rejection is requested.

Moreover, with specific regard to dependent **claim 6**, the Examiner asserts that Alexander discloses the aspect of a record of play sequences. However, Alexander does not disclose play sequences, let alone a *record* of play sequences, in the Examiner's cited section, or elsewhere. Rather, the cited portion of Alexander (Column 28, lines 30-52) merely sets forth recording user actions such as channel

changes, channel information, and volume adjustments. However, Alexander does not specifically describe storing a record of play sequence commands as set forth in claim 6. "Play sequence commands" are clearly defined in the specification, for example, at paragraph [0072]: "User behaviors will typically include play sequence commands, *such as fast forward, pause, replay, jump, select, and rewind*. These play sequence commands indicate the level of interest a user has in material. Each play sequence command can be assigned an interest level value, which can be used in calculating the user's interest in a particular content segment." The Examiner has introduced Vallone which she alleges addresses the claimed play sequences. However, Vallone fails to overcome the deficiencies of Alexander with regard to the claimed *record* of play sequences. Withdrawal of this rejection is requested.

Still furthermore, with specific regard to dependent **claim 7**, the Examiner maintains the assertion that Alexander discloses the claimed aspect of a record of presence or absence of a user, stating that "if the user leaves the TV on for a duration of time and steps away from the TV, an absence of interaction with the TV will occur, which will be recorded as an absence of interaction by the system." The Examiner has previously alleged Column 28, lines 52-58 as teaching this aspect. However, the cited passage discusses recording information during an absence of *interaction* between the viewer and the television or the EPG. An absence of user interaction is not determinative of user absence, as confirmed by the cited passage, which goes on to provide an example in which a user is deemed to be present and watching an advertisement if a channel change does not occur during the advertisement. To the contrary, claim 7 sets forth a record of user absence or presence, which is explained in the specification at paragraph [0073]. Alexander does not disclose the aspect of recording user presence or absence as set forth in claim 7. Withdrawal of this rejection is requested

Claim 10 sets forth that analyzing snapshots includes determining a level of interest in particular content, responsive to play sequence commands that have occurred. None of the cited references, alone or in combination, discloses determining a level of user interest *as a function of executed play sequences*. Again, executed play sequences are clearly set forth in the specification as including commands such as fast forward, rewind, jump (e.g., skip), etc. (See, e.g., paragraph

[0072].) The Examiner now alleges that Vallone teaches the claimed play sequences. However, Vallone fails to overcome the deficiencies of Alexander with regard to the claimed *record* of play sequences.

Claim 10 further sets forth that the snapshots being analyzed contain information related to user behavior and/or interests. The claimed automatic analysis of user behavior snapshots is different than the user analysis of snapshots associated with non-user entities as set forth in the cited reference. Claim 10 calls for updating an adaptive personal memory based on the analysis of content and *behaviors of a relevant user*. Further, claim 10 calls for the processor to periodically generate snapshots of user-viewed content and behavior, each snapshot representing a preceding period since the generation of a prior snapshot. Further, claim 10 calls for analyzing a series of the snapshots to determine *user behavior* trends and patterns in content experienced *by the user*. The cited references neither disclose such an organization nor the use of snapshots as currently claimed.

In the Office Action dated April 28, 2008, the Examiner admitted that Arellano fails to disclose analyzing snapshots indicative of user interest for adaptive memory tracking and evolution of the user, and alleged that Akella taught such aspects (i.e., analyzing snapshots). However, the Examiner now asserts that Arellano discloses the aspect of analyzing snapshots including determining a level of interest in particular content. To the contrary, claim 10 clearly sets forth that the determination of a level of user interest in particular content is responsive to play sequence commands. None of the cited references teach or suggest using play sequence commands (e.g., fast forward, rewind, replay, etc.) to determine a level of user interest, let alone a record of play sequences. Withdrawal of this rejection is requested.

Claim 17 sets forth that play sequence commands are each assigned an interest level value, and that the processor executes code for calculating a user's interest in a particular content segment as a function of the interest level values of play sequence commands in the record. As stated above with regard to claim 6, Alexander does not disclose a *record* of play sequence commands, but rather merely discusses recording channel changes, volume adjustments, and channel information related to content on the channels to and from which a user switches. The Examiner

has now introduced Vallone which is alleged to teach the claimed play sequences. However, Vallone fails to overcome the deficiencies of Alexander with regard to the claimed *record* of play sequences. Moreover, none of the cited references discloses assigning an interest level value to play sequence commands, let alone calculating a level of user interest as a function of the interest level values associated with recorded play sequence commands.

Claim 17 sets forth that the analyzed user behavior includes a record of play sequence commands, and furthermore calls for an adaptive memory and a processor which maintains the adaptive memory. Further, the code implemented by the processor analyzes the experienced content, the user behavior, and responses to at least one query to create updated data and updates the adaptive memory with the updated data. The updating and analyzing are to be done using modal, non-monotonic logic. The cited references do not teach or suggest analyzing play sequence commands in this manner, let alone the claimed play sequence command record.

The present application acknowledges that non-monotonic logic and modal operators are known mathematical techniques. However, the present application finds them particularly advantageous techniques relative to other logic techniques. Thuraisingham provides a list of logic or reasoning processes, presented as being equivalent to each other. There is no suggestion in Thuraisingham that non-monotonic reasoning is superior, and thus, absent such a suggestion, it appears that the Examiner is using the present application as a blueprint to cobble together the subject rejections. Moreover, it would not have been obvious to try non-monotonic logic over other techniques because it could not be predicted that the results would be enhanced relative to other techniques. Neither Thuraisingham nor Alexander provides any motivation for picking non-monotonic reasoning out of the list. Withdrawal of this rejection is requested.

Claim 29 sets forth that play sequence commands are each assigned an interest level value, and calculating a user's interest in a particular content segment as a function of the interest level values of play sequence commands in the record. In response to the 101 rejection, claim 29 has been amended herein to set forth that the computer program is stored on a medium readable by a data processing device.

Support for this amendment may be found in the specification, for example in original claim 1.

As stated above with regard to claims 6 and 17, Alexander does not disclose a *record* of play sequence commands, but rather merely records channel changes, volume changes, and channel information related to content on the channels between which a user switches. The Examiner has introduced Vallone which she alleges shows claimed play sequences. However, Vallone fails to overcome the deficiencies of Alexander with regard to the claimed *record* of play sequences. Moreover, none of the cited references discloses assigning an interest level value to play sequence commands, calculating a level of user interest as a function of the interest level values associated with recorded play sequence commands, let alone a record of play sequence commands.

Moreover, claim 29 calls for performing at least one of maintaining, analyzing, and updating steps using non-monotonic logic, wherein the non-monotonic logic is modal logic. Thuraisingham, cited by the Examiner, provides a list of various logic techniques, all presented as equivalents. There is no suggestion in Thuraisingham that one of these techniques, particularly non-monotonic modal logic, would be superior. Further, none of the cited references provides any motivation or reason to suspect that the combination of modal non-monotonic logic in the data processing method of claim 29 would be superior or advantageous to other methods. Thus, it would not have been obvious to try non-monotonic logic over other techniques because it could not be predicted that the results would be enhanced relative to other techniques. Withdrawal of this rejection is requested.

With specific regard to dependent **claim 24**, the Examiner cites Column 28, lines 52-58 of Alexander in rejecting the aspect of a record of the presence or absence of the user. However, as stated above with regard to claim 7, the cited passage merely discusses recording information related to displayed content during a period of user inactivity, but is silent with regard to detecting the presence or absence of a user. Withdrawal of this rejection is requested.

Claim 34 sets forth that the play sequence commands are each assigned an interest level value, and code for calculating a user's interest in a particular content segment as a function of the interest level values of play sequence

commands in the record. As stated above, Alexander does not disclose a record of play sequence commands, but rather merely records channel changes, volume changes, and channel information related to content on the channels between which a user switches. The Examiner has introduced Vallone which she alleges discloses the claimed play sequences. However, Vallone fails to overcome the deficiencies of Alexander with regard to the claimed *record* of play sequences. Moreover, none of the cited references discloses assigning an interest level value to play sequence commands, let alone calculating a level of user interest as a function of the interest level values associated with recorded play sequence commands.

Claim 34 also calls for a code for analyzing a plurality of snapshots to develop patterns, trends, and tendencies in a relevant user's behavior using modal non-monotonic logic. The only reference to a snapshot in the cited Arellano reference appears in paragraph [0018]. However, Arellano does not suggest periodically generating snapshots and then analyzing a plurality of the snapshots to develop patterns, trends, and tendencies in the relevant *user's* behavior. The Examiner asserts that Arellano teaches this aspect in paragraph [0090] which mentions a tendency of a user. However, nothing in the Examiner's cited sections suggests that such tendency is determined through snapshot analysis. Withdrawal of this rejection is requested.

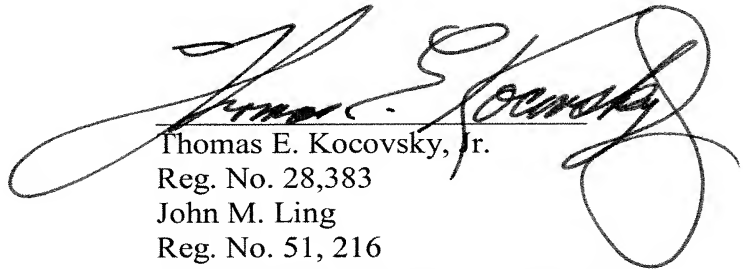
With specific regard to dependent **claim 35**, the Examiner cites Column 28, lines 52-58 of Alexander in rejecting the aspect of a record of the presence or absence of the user. However, as stated above with regard to claim 7, the cited passage merely discusses recording information related to displayed content during a period of user inactivity, but is silent with regard to detecting the presence or absence of a user. Withdrawal of this rejection is requested.

CONCLUSION

For the reasons set forth above, it is submitted that all claims now comply with the statutory requirements and distinguish patentably and unobviously over the references of record. An early allowance of all claims is requested.

Respectfully submitted,

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A large, stylized handwritten signature in black ink, which appears to read "Thomas E. Kocovsky, Jr.", is written over the printed name and registration number.

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